

Approximation Of Time-Delay Systems

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Summary

We propose a new method for approximating time-delays in dynamical systems. A weighted H norm criterion is minimized to obtain rational approximation of e-sd. We report the approximation in a diagram relating both the amount of time delay and the bandwidth to the order of the approximating rational function for a given level of infinity norm. The obtained approximations are compared to the widely used Pade's approximation. Examples are used for illustrations

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